

What is claimed is:

1. A position indicator for indicating a relative position of two components, the position indicator comprising:
 - 5 a first component and a second components which are displaceable relative to each other;
 - 10 a first indicator pattern fixedly disposed on the first component, and a second indicator pattern fixedly disposed on the second component,
 - 15 wherein the first indicator pattern extends in a direction of extension over a first length, and wherein the first indicator pattern is composed of a plurality of substantially identical first partial patterns, wherein the first partial patterns are substantially periodically arranged in the direction of extension,
 - 20 wherein the second indicator pattern extends in the direction of extension over a second length, and wherein the second indicator pattern is composed of a plurality of substantially identical second partial patterns, wherein the second partial patterns are substantially periodically arranged in the direction of extension,
 - 25 wherein the first partial patterns each have a configuration that extends along a first line extending transversely to the direction of extension of the indicator patterns,
 - 30 wherein the second partial patterns each have a configuration that extends along a second line extending transversely to the direction of extension of the indicator patterns, and
 - 35

wherein the first and second lines are oriented at different angles with respect to the direction of extension of the indicator patterns.

5

2. The position indicator according to claim 1, wherein the first line of extension of the first partial patterns extends orthogonally to the direction of extension of the indicator patterns.

10

3. The position indicator according to claim 1, wherein the configuration of at least one of the first partial patterns comprises a plurality of sub-patterns spaced apart from each other along the first line.

15

4. The position indicator according to claim 1, wherein the configuration of at least one of the second partial patterns comprises a plurality of sub-patterns spaced apart from each other along the second line.

20

5. The position indicator according to claim 3, wherein each of the sub-patterns is formed as a transparent portion disposed within a substantially non-transparent surrounding.

25

6. The position indicator according to claim 3, wherein the number of the plurality of separate sub-patterns is greater than five.

30

7. The position indicator according to claim 1, wherein at least one of the first partial patterns has a substantially continuous configuration.

35

8. The position indicator according to claim 1, wherein at least one of the first and second lines is a straight line.

9. The position indicator according to claim 1, wherein the first and second components are rotatable relative to each other about an axis of rotation.

5

10. The position indicator according to claim 9, wherein a number of the first partial patterns is 12 and wherein a number of the second partial patterns is 12.

10

11. The position indicator according to claim 10, wherein each of the first partial patterns comprises five sub-patterns spaced apart from each other in a radial direction relative to the along the axis of rotation.

15

12. The position indicator according to claim 9, wherein the first and second lines are spiral lines extending about the axis of rotation.

20

13. The position indicator according to claim 12, wherein the first line is a logarithmic spiral having a plurality of windings about the axis of rotation.

25

14. A position indicator for indicating a relative position of two components, the position indicator comprising:

a first component and a second components which are displaceable relative to each other;

30

a first indicator pattern fixedly disposed on the first component, and a second indicator pattern fixedly disposed on the second component,

35

wherein the first indicator pattern extends in a direction of extension over a first length, and wherein the first indicator pattern is composed of a plurality of substantially identical first partial

patterns, wherein the first partial patterns are substantially periodically arranged in the direction of extension,

5 wherein the second indicator pattern extends in the direction of extension over a second length, and wherein the second indicator pattern is composed of a plurality of substantially identical second partial patterns, wherein the second partial patterns are substantially periodically arranged in the direction of extension,

10
15 wherein the first partial pattern is composed of a plurality of sub-patterns, wherein the sub-patterns of the first partial pattern are disposed adjacent to one another in the direction of extension of the indicator patterns, and wherein the sub-patterns of each pair of the plurality of sub-patterns of the first partial pattern are different from each other, and

20
25 wherein the second partial pattern is composed of a plurality of sub-patterns, wherein the sub-patterns of the second partial pattern are disposed adjacent to one another in the direction of extension of the indicator patterns, and wherein the sub-patterns of each pair of the plurality of sub-patterns of the second partial pattern are different from each other.

30 15. The position indicator according to claim 14, wherein each sub-pattern of the first partial pattern has associated therewith a corresponding sub-pattern of the second partial pattern,

35 wherein the sub-patterns of the first and second partial patterns are arranged such that, at every position of relative displacement of the first and second components, there exists a location where one

of the sub-patterns of the first partial pattern is disposed at least one of adjacent to and overlapping with the sub-pattern of the second partial pattern corresponding to the one sub-pattern of the first partial pattern.

5

16. The position indicator according to claim 14, wherein

10 each sub-pattern of the first partial pattern differs in at least one optical property from the corresponding sub-pattern of the second partial pattern associated therewith by a lesser extent than from each other sub-pattern of the second partial pattern.

15

17. The position indicator according to claim 16, wherein the optical property comprises at least one of a brightness, a shade of colour, a saturation of colour, and a texture.

20

18. The position indicator according to claim 14, wherein the first and second components are rotatable relative to each other about an axis of rotation.

25

19. The position indicator according to claim 18, wherein the sub-patterns of the first and second partial patterns are formed of lines extending away from the axis of rotation.

30

20. The position indicator according to claim 19, wherein the lines of the sub-patterns of the first partial pattern extend to different radial distances from the axis of rotation,

35

wherein the lines of the sub-patterns of the second partial pattern extend to different radial distances from the axis of rotation, and

wherein a difference in the radial extension of each
sub-pattern of the first partial pattern and the
corresponding sub-pattern of the second partial
pattern associated therewith is less than between the
sub-pattern of the first partial pattern and each
other sub-pattern of the second partial pattern.

5 21. The position indicator according to claim 14, wherein
a number of the first partial patterns is 12 and
10 wherein a number of the second partial patterns is
13.

15 22. The position indicator according to claim 14, wherein
a number of the first partial patterns is 11 and
wherein a number of the second partial patterns is
12.

20 23. The position indicator according to claim 18, further
comprising a plurality of first markings that are
disposed on the first component such that they are
distributed around a circumference thereof at equal
distances from one another, and a plurality of second
markings that are disposed on the second component
such that they are distributed around a circumference
thereof at equal distances from one another, and
25 wherein a number of the first markings differs from a
number of the second markings by one.

30 24. The position indicator according to claim 23, wherein
the number of the second markings is sixty.

25 25. The position indicator according to claim 18, a
number of the different sub-patterns is five.

35 26. The position indicator according to claim 14, wherein
the first indicator patter is distributed over at
least two indication planes, and wherein at least a

portion of the second indicator patter is sandwiched between the at least two indication planes.

27. A watch comprising the position indicator according to claim 14.

28. A measuring apparatus comprising a sensor and a position indicator according to claim 14 for indicating a measuring result of the sensor.

29. The measuring apparatus according to claim 28, wherein the sensor is configured to detect at least one of a time, a velocity, a content of a container, a length, a temperature and a pressure.

30. A use of the position indicator according to claim 14 for indicating at least one physical quantity.

31. The use of the position indicator according to claim 30, wherein the physical quantity comprises a time, a velocity, a content of a container, a length, a temperature and a pressure.

32. The position indicator according to claim 9, further comprising a plurality of first markings that are disposed on the first component such that they are distributed around a circumference thereof at equal distances from one another, and a plurality of second markings that are disposed on the second component such that they are distributed around a circumference thereof at equal distances from one another, and wherein a number of the first markings differs from a number of the second markings by one.

33. The position indicator according to claim 32, wherein the number of the second markings is sixty.

34. The position indicator according to claim 9, wherein
the first indicator pattern is distributed over at
least two indication planes, and wherein at least a
portion of the second-indicator patter is sandwiched
between the at least two indication planes.

5 35. A watch comprising the position indicator according
to claim 1.

10 36. A measuring apparatus comprising a sensor and a
position indicator according to claim 11 for
indicating a measuring result of the sensor.

15 37. The measuring apparatus according to claim 36,
wherein the sensor is configured to detect at least
one of a time, a velocity, a content of a container,
a length, a temperature and a pressure.

20 38. A use of the position indicator according to claim 1
for indicating at least one physical quantity.

25 39. The use of the position indicator according to claim
38, wherein the physical quantity comprises a time, a
velocity, a content of a container, a length, a
temperature and a pressure.

40. A method of manufacturing a position indicator, the
method comprising:

30 modifying a basic pattern in order to generate a
modified pattern,

35 applying a plurality of the basic patterns to a first
component to form a first indicator pattern on the
first component, wherein the basic patterns are
substantially periodically arranged in a direction of
extension of the first indicator pattern,

applying a plurality of the modified patterns to a second component to form a second indicator pattern on the second component, wherein the modified patterns are substantially periodically arranged in a direction of extension of the second indicator pattern, and wherein the modified pattern is obtained from the basic pattern by modifying the basic pattern; and

10 disposing the second component relative to the first component such that the first and second components are displaceable relative to each other and that at least portions of the first and second indicator patterns are arranged to be adjacent to each other
15 and to have substantially parallel directions of extensions.

41. The method according to claim 40, wherein the modified pattern is obtainable from the basic pattern by reducing a length of the basic pattern in the direction of extension of the first indicator pattern.

20
25 42. The method according to claim 41, wherein the reducing of the length of the basic pattern comprises cutting off a portion of the basic pattern.

30 43. The method according to claim 41, wherein the reducing of the length of the basic pattern comprises a scaling of the basic pattern in the direction of extension.